

gta gag ctg aac aca gtc tat ttc att ggg gcc cat aat att cct aat Val Glu Leu Asn Thr Val Tyr Phe Ile Gly Ala His Asn Ile Pro Asn 115 120 125	432
gca aat atg aat gaa gat ggc cct tcc atg tct gtg aat ttc acc tca Ala Asn Met Asn Glu Asp Gly Pro Ser Met Ser Val Asn Phe Thr Ser 130 135 140 145	480
cca ggc tgc cta gac cac ata atg aaa tat aaa aag tgt gtc aag Pro Gly Cys Leu Asp His Ile Met Lys Tyr Lys Lys Cys Val Lys 150 155 160	528
gcc gga agc ctg tgg gat ccg aac atc act gct tgt aag aag aat gag Ala Gly Ser Leu Trp Asp Pro Asn Ile Thr Ala Cys Lys Lys Asn Glu 165 170 175	576
gag aca gta gaa gtg aac ttc aca acc act ccc ctg gga aac aga tac Glu Thr Val Glu Val Asn Phe Thr Thr Pro Leu Gly Asn Arg Tyr 180 185 190	624
atg gct ctt atc caa cac agc act atc atc ggg ttt tct cag gtg ttt Met Ala Leu Ile Gln His Ser Thr Ile Ile Gly Phe Ser Gln Val Phe 195 200 205	672
gag cca cac cag aag aaa caa acg cga gct tca gtg gtg att cca gtg Glu Pro His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val 210 215 220 225	720
act ggg gat agt gaa ggt gct acg gtg cag ctg act cca tat ttt cct Thr Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro 230 235 240	768
act tgt ggc agc gac tgc atc cga cat aaa gga aca gtt gtg ctc tgc Thr Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu Cys 245 250 255	816
cca caa aca ggc gtc cct ttc cct ctg gat aac aac aaa agc aag ccg Pro Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser Lys Pro 260 265 270	864
gga ggc tgg ctg cct ctc ctc ctg ctg tct ctg ctg gtg gcc aca tgg Gly Gly Trp Leu Pro Leu Leu Leu Ser Leu Leu Val Ala Thr Trp 275 280 285	912
gtg ctg gtg gca ggg atc tat cta atg tgg agg cac gaa agg atc aag Val Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His Glu Arg Ile Lys 290 295 300 305	960
aag act tcc ttt tct acc acc aca cta ctg ccc ccc att aag gtt ctt Lys Thr Ser Phe Ser Thr Thr Leu Leu Pro Pro Ile Lys Val Leu 310 315 320	1008
gtg gtt tac cca tct gaa ata tgt ttc cat cac aca att tgt tac ttc Val Val Tyr Pro Ser Glu Ile Cys Phe His His Thr Ile Cys Tyr Phe 325 330 335	1056
act gaa ttt ctt caa aac cat tgc aga agt gag gtc atc ctt gaa aag Thr Glu Phe Leu Gln Asn His Cys Arg Ser Glu Val Ile Leu Glu Lys 340 345 350	1104

tgg cag aaa aag aaa ata gca gag atg ggt cca gtg cag tgg ctt gcc Trp Gln Lys Lys Lys Ile Ala Glu Met Gly Pro Val Gln Trp Leu Ala 355 360 365	1152
actcaa aag aag gca gca gac aaa gtc gtc ttc ctt ctt tcc aat gac Thr Gln Lys Lys Ala Ala Asp Lys Val Val Phe Leu Leu Ser Asn Asp 370 375 380 385	1200
gtc aac agt gtg tgc gat ggt acc tgc aag aac gag ggc agt ccc Val Asn Ser Val Cys Asp Gly Thr Cys Gly Lys Ser Glu Gly Ser Pro 390 395 400	1248
agt gag aac tct caa gac ctc ttc ccc ctt gcc ttt aac ctt ttc tgc Ser Glu Asn Ser Gln Asp Leu Phe Pro Leu Ala Phe Asn Leu Phe Cys 405 410 415	1296
agt gat cta aga agc cag att cat ctg cac aaa tac gtg gtg gtc tac Ser Asp Leu Arg Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr 420 425 430	1344
ttt aga gag att gat aca aaa gac gat tac aat gct ctc agt gtc tgc Phe Arg Glu Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Cys 435 440 445	1392
ccc aag tac cac ctc atg aag gat gcc act gct ttc tgt gca gaa ctt Pro Lys Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu 450 455 460 465	1440
ctc cat gtc aag cag cag gtg tca gca gga aaa aga tca caa gcc tgc Leu His Val Lys Gln Gln Val Ser Ala Gly Lys Arg Ser Gln Ala Cys 470 475 480	1488
cac gat ggc tgc tgc tcc ttg tagccccatc atgagaagca agagaccta His Asp Gly Cys Cys Ser Leu 485	1539
aaggcttcct atccccaccaa ttacaggaa aaaacgtgtg atgatcctga agcttactat	1599
gcagcctaca aacagcctta gtaataaaa cattttatac caataaaatt ttcaaatatt	1659
gctaactaat gtagcattaa ctaacgattg gaaactacat ttacaacttc aaagctgttt	1719
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ataaagcatc ttcatc	1796
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<213> Homo sapiens	
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Arg Val Glu Pro Val Thr Thr Ser Val Ala Thr Gly Asp Tyr Ser Ile
35 40 45 50

Leu Met Asn Val Ser Trp Val Leu Arg Ala Asp Ala Ser Ile Arg Leu
55 60 65

Leu Lys Ala Thr Lys Ile Cys Val Thr Gly Lys Ser Asn Phe Gln Ser
70 75 80

Tyr Ser Cys Val Arg Cys Asn Tyr Thr Glu Ala Phe Gln Thr Gln Thr
85 90 95

Arg Pro Ser Gly Gly Lys Trp Thr Phe Ser Tyr Ile Gly Phe Pro Val
100 105 110

Glu Leu Asn Thr Val Tyr Phe Ile Gly Ala His Asn Ile Pro Asn Ala
115 120 125 130

Asn Met Asn Glu Asp Gly Pro Ser Met Ser Val Asn Phe Thr Ser Pro
135 140 145

Gly Cys Leu Asp His Ile Met Lys Tyr Lys Lys Cys Val Lys Ala
150 155 160

Gly Ser Leu Trp Asp Pro Asn Ile Thr Ala Cys Lys Lys Asn Glu Glu
165 170 175

Thr Val Glu Val Asn Phe Thr Thr Thr Pro Leu Gly Asn Arg Tyr Met
180 185 190

Ala Leu Ile Gln His Ser Thr Ile Ile Gly Phe Ser Gln Val Phe Glu
195 200 205 210

Pro His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val Thr
215 220 225

Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro Thr
230 235 240

Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu Cys Pro
245 250 255

Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser Lys Pro Gly
260 265 270

Gly Trp Leu Pro Leu Leu Leu Ser Leu Leu Val Ala Thr Trp Val
275 280 285 290

Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His Glu Arg Ile Lys Lys
295 300 305

Thr Ser Phe Ser Thr Thr Leu Leu Pro Pro Ile Lys Val Leu Val
310 315 320

Val Tyr Pro Ser Glu Ile Cys Phe His His Thr Ile Cys Tyr Phe Thr
325 330 335

Glu Phe Leu Gln Asn His Cys Arg Ser Glu Val Ile Leu Glu Lys Trp
340 345 350

Gln Lys Lys Ile Ala Glu Met Gly Pro Val Gln Trp Leu Ala Thr
355 360 365 370

Gln Lys Lys Ala Ala Asp Lys Val Val Phe Leu Leu Ser Asn Asp Val
375 380 385

Asn Ser Val Cys Asp Gly Thr Cys Gly Lys Ser Glu Gly Ser Pro Ser
390 395 400

Glu Asn Ser Gln Asp Leu Phe Pro Leu Ala Phe Asn Leu Phe Cys Ser
405 410 415

Asp Leu Arg Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr Phe
420 425 430

Arg Glu Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Cys Pro
435 440 445 450

Lys Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu Leu
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Asp Gly Cys Cys Ser Leu
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Gly Gly Ala Asp Leu Lys Gly Asp Tyr Asn Ala Leu Ser Val Cys Pro
20 25 30
caa tat cat ctc atg aag gac gcc aca gct ttc cac aca gaa ctt ctc 144
Gln Tyr His Leu Met Lys Asp Ala Thr Ala Phe His Thr Glu Leu Leu
35 40 45
aag gct acg cag agc atg tca gtg aag aaa cgc tca caa gcc tgc cat 192
Lys Ala Thr Gln Ser Met Ser Val Lys Lys Arg Ser Gln Ala Cys His
50 55 60
gat agc tgt tca ccc ttg tagtccaccc ggggaaatag agactctgaa 240
Asp Ser Cys Ser Pro Leu
65 70
gccttcctac tctcccttcc agtgacaaat gctgtgtgac gactctgaaa tgtgtggag 300
aggctgtgtg gaggtagtgc tatgtacaaa cttgctttaa aactggagtt tgcaaagtca 360
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20 25 30

Gln Tyr His Leu Met Lys Asp Ala Thr Ala Phe His Thr Glu Leu Leu

35

40

45

Lys Ala Thr Gln Ser Met Ser Val Lys Lys Arg Ser Gln Ala Cys His
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Asp Ser Cys Ser Pro Leu
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tctgcccccc ttgggggcan ccacagggcc tcaggcctgg gtgccacctg gcactagaag 180

atg cct gtg ccc tgg ttc ttg ctg tcc ttg gca ctg ggc cga agc cag 228
 Met Pro Val Pro Trp Phe Leu Leu Ser Leu Ala Leu Gly Arg Ser Gln
 -20 -15 -10 -5

tgg atc ctt tct ctg gag agg ctt gtg ggg cct cag gac gct acc cac 276
 Trp Ile Leu Ser Leu Glu Arg Leu Val Gly Pro Gln Asp Ala Thr His
 -1 1 5 10

tgc tct ccg ggc ctc tcc tgc cgc ctc tgg gac agt gac ata ctc tgc 324
 Cys Ser Pro Gly Leu Ser Cys Arg Leu Trp Asp Ser Asp Ile Leu Cys
 15 20 25

ctg cct ggg gac atc gtg cct gct ccg ggc ccc gtg ctg gcg cct acg 372
 Leu Pro Gly Asp Ile Val Pro Ala Pro Gly Pro Val Leu Ala Pro Thr
 30 35 40

cac ctg cag aca gag ctg gtg ctg agg tgc cag aag gag acc gac tgt 420
 His Leu Gln Thr Glu Leu Val Leu Arg Cys Gln Lys Glu Thr Asp Cys
 45 50 55 60

gac ctc tgt ctg cgt gtg gct gtc cac ttg gcc gtg cat ggg cac tgg Asp Leu Cys Leu Arg Val Ala Val His Leu Ala Val His Gly His Trp 65 70 75	468
gaa gag cct gaa gat gag gaa aag ttt gga gga gca gct gac tta ggg Glu Glu Pro Glu Asp Glu Glu Lys Phe Gly Gly Ala Ala Asp Leu Gly 80 85 90	516
gtg gag gag cct agg aat gcc tct ctc cag gcc caa gtc gtg ctc tcc Val Glu Glu Pro Arg Asn Ala Ser Leu Gln Ala Gln Val Val Leu Ser 95 100 105	564
ttc cag gcc tac cct act gcc cgc tgc gtc ctg ctg gag gtg caa gtg Phe Gln Ala Tyr Pro Thr Ala Arg Cys Val Leu Leu Glu Val Gln Val 110 115 120	612
cct gct gcc ctt gtg cag ttt ggt cag tct gtg ggc tct gtg gta tat Pro Ala Ala Leu Val Gln Phe Gly Gln Ser Val Gly Ser Val Val Tyr 125 130 135 140	660
gac tgc ttc gag gct gcc cta ggg agt gag gta cga atc tgg tcc tat Asp Cys Phe Glu Ala Ala Leu Gly Ser Glu Val Arg Ile Trp Ser Tyr 145 150 155	708
act cag ccc agg tac gag aag gaa ctc aac cac aca cag cag ctg cct Thr Gln Pro Arg Tyr Glu Lys Glu Leu Asn His Thr Gln Gln Leu Pro 160 165 170	756
gac tgc agg ggg ctc gaa gtc tgg aac agc atc ccg agc tgc tgg gcc Asp Cys Arg Gly Leu Glu Val Trp Asn Ser Ile Pro Ser Cys Trp Ala 175 180 185	804
ctg ccc tgg ctc aac gtg tca gca gat ggt gac aac gtg cat ctg gtt Leu Pro Trp Leu Asn Val Ser Ala Asp Gly Asp Asn Val His Leu Val 190 195 200	852
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cag gtc cag ggc ccc cca aaa ccc cgg tgg cac aaa aac ctg act gga Gln Val Gln Gly Pro Pro Lys Pro Arg Trp His Lys Asn Leu Thr Gly 225 230 235	948
ccg cag atc att acc ttg aac cac aca gac ctg gtt ccc tgc ctc tgt Pro Gln Ile Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys Leu Cys 240 245 250	996
att cag gtg tgg cct ctg gaa cct gac tcc gtt agg acg aac atc tgc Ile Gln Val Trp Pro Leu Glu Pro Asp Ser Val Arg Thr Asn Ile Cys 255 260 265	1044
ccc ttc agg gag gac ccc cgc gca cac cag aac ctc tgg caa gcc gcc Pro Phe Arg Glu Asp Pro Arg Ala His Gln Asn Leu Trp Gln Ala Ala 270 275 280	1092
cga ctg cga ctg ctg acc ctg cag agc tgg ctg ctg gac gca ccg tgc Arg Leu Arg Leu Leu Thr Leu Gln Ser Trp Leu Leu Asp Ala Pro Cys 285 290 295 300	1140

tcg ctg ccc gca gaa gcg gca ctg tgc tgg cgg gct ccg ggt ggg gac Ser Leu Pro Ala Glu Ala Ala Leu Cys Trp Arg Ala Pro Gly Gly Asp 305	310	315	1188	
ccc tgc cag cca ctg gtc cca ccg ctt tcc tgg gag aat gtc act gtg Pro Cys Gln Pro Leu Val Pro Pro Leu Ser Trp Glu Asn Val Thr Val 320	325	330	1236	
gac gtg aac agc tcg gag aag ctg cag ctg cag gag tgc ttg tgg gct Asp Val Asn Ser Ser Glu Lys Leu Gln Leu Gln Glu Cys Leu Trp Ala 335	340	345	1284	
gac tcc ctg ggg cct ctc aaa gac gat gtg cta ctg ttg gag aca cga Asp Ser Leu Gly Pro Leu Lys Asp Asp Val Leu Leu Leu Glu Thr Arg 350	355	360	1332	
ggc ccc cag gac aac aga tcc ctc tgt gcc ttg gaa ccc agt ggc tgt Gly Pro Gln Asp Asn Arg Ser Leu Cys Ala Leu Glu Pro Ser Gly Cys 365	370	375	380	1380
act tca cta ccc agc aaa gcc tcc acg agg gca gct cgc ctt gga gag Thr Ser Leu Pro Ser Lys Ala Ser Thr Arg Ala Ala Arg Leu Gly Glu 385	390	395	1428	
tac tta cta caa gac ctg cag tca ggc cag tgt ctg cag cta tgg gac Tyr Leu Leu Gln Asp Leu Gln Ser Gly Gln Cys Leu Gln Leu Trp Asp 400	405	410	1476	
gat gac ttg gga gcg cta tgg gcc tgc ccc atg gac aaa tac atc cac Asp Asp Leu Gly Ala Leu Trp Ala Cys Pro Met Asp Lys Tyr Ile His 415	420	425	1524	
aag cgc tgg gcc ctc gtg tgg ctg gcc tgc cta ctc ttt gcc gct gcg Lys Arg Trp Ala Leu Val Trp Leu Ala Cys Leu Leu Phe Ala Ala Ala 430	435	440	1572	
ctt tcc ctc atc ctc ctt ctc aaa aag gat cac gac gcg aaa ggg tgg ctg Leu Ser Leu Ile Leu Leu Lys Lys Asp His Ala Lys Gly Trp Leu 445	450	455	460	1620
agg ctc ttg aaa cag gac gtc cgc tcg ggg gcg gcc gcc agg ggc cgc Arg Leu Leu Lys Gln Asp Val Arg Ser Gly Ala Ala Ala Arg Gly Arg 465	470	475	1668	
gcg gct ctg ctc tac tca gcc gat gac tcg ggt ttc gag cgc ctg Ala Ala Leu Leu Tyr Ser Ala Asp Asp Ser Gly Phe Glu Arg Leu 480	485	490	1716	
gtg ggc gcc ctg gcg tcg gcc ctg tgc cag ctg ccg ctg cgc gtg gcc Val Gly Ala Leu Ala Ser Ala Leu Cys Gln Leu Pro Leu Arg Val Ala 495	500	505	1764	
gta gac ctg tgg agc cgt cgt gaa ctg agc gcg cag ggg ccc gtg gct Val Asp Leu Trp Ser Arg Arg Glu Leu Ser Ala Gln Gly Pro Val Ala 510	515	520	1812	
tgg ttt cac gcg cag cgg cgc cag acc ctg cag gag ggc ggc gtg gtg Trp Phe His Ala Gln Arg Arg Gln Thr Leu Gln Glu Gly Gly Val Val 525	530	535	540	1860
gtc ttg ctc ttc tct ccc ggt gcg gtg gcg ctg tgc agc gag tgg cta			1908	

Val Leu Leu Phe Ser Pro Gly Ala Val Ala Leu Cys Ser Glu Trp Leu			
545	550	555	
cag gat ggg gtg tcc ggg ccc ggg gcg cac ggc ccg cac gac gcc ttc			1956
Gln Asp Gly Val Ser Gly Pro Gly Ala His Gly Pro His Asp Ala Phe			
560	565	570	
cgc gcc tcg ctc agc tgc gtg ctg ccc gac ttc ttg cag ggc cggtcg			2004
Arg Ala Ser Leu Ser Cys Val Leu Pro Asp Phe Leu Gln Gly Arg Ala			
575	580	585	
ccc ggc agc tac gtg ggg gcc tgc ttc gac agg ctg ctc cac ccg gac			2052
Pro Gly Ser Tyr Val Gly Ala Cys Phe Asp Arg Leu Leu His Pro Asp			
590	595	600	
gcc gta ccc gcc ctt ttc cgc acc gtg ccc gtc ttc aca ctg ccc tcc			2100
Ala Val Pro Ala Leu Phe Arg Thr Val Pro Val Phe Thr Leu Pro Ser			
605	610	615	620
caa ctg cca gac ttc ctg ggg gcc ctg cag cag cct cgc gcc ccg cgt			2148
Gln Leu Pro Asp Phe Leu Gly Ala Leu Gln Gln Pro Arg Ala Pro Arg			
625	630	635	
tcc ggg cgg ctc caa gag aga gcg gag caa gtg tcc cgg gcc ctt cag			2196
Ser Gly Arg Leu Gln Glu Arg Ala Glu Gln Val Ser Arg Ala Leu Gln			
640	645	650	
cca gcc ctg gat agc tac ttc cat ccc ccg ggg acn tcc gcg ccg gga			2244
Pro Ala Leu Asp Ser Tyr Phe His Pro Pro Gly Thr Ser Ala Pro Gly			
655	660	665	
cgc ggg gtg gga cca ggg gcg gga cct ggg gcg ggg gac ggg act			2289
Arg Gly Val Gly Pro Gly Ala Gly Pro Gly Ala Gly Asp Gly Thr			
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taaataaagg cagacgctg			2308

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 <213> Homo sapiens

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-1	1	5	10

Cys Ser Pro Gly Leu Ser Cys Arg Leu Trp Asp Ser Asp Ile Leu Cys			
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Leu Pro Gly Asp Ile Val Pro Ala Pro Gly Pro Val Leu Ala Pro Thr			
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His Leu Gln Thr Glu Leu Val Leu Arg Cys Gln Lys Glu Thr Asp Cys
45 50 55 60

Asp Leu Cys Leu Arg Val Ala Val His Leu Ala Val His Gly His Trp
65 70 75

Glu Glu Pro Glu Asp Glu Glu Lys Phe Gly Gly Ala Ala Asp Leu Gly
80 85 90

Val Glu Glu Pro Arg Asn Ala Ser Leu Gln Ala Gln Val Val Leu Ser
95 100 105

Phe Gln Ala Tyr Pro Thr Ala Arg Cys Val Leu Leu Glu Val Gln Val
110 115 120

Pro Ala Ala Leu Val Gln Phe Gly Gln Ser Val Gly Ser Val Val Tyr
125 130 135 140

Asp Cys Phe Glu Ala Ala Leu Gly Ser Glu Val Arg Ile Trp Ser Tyr
145 150 155

Thr Gln Pro Arg Tyr Glu Lys Glu Leu Asn His Thr Gln Gln Leu Pro
160 165 170

Asp Cys Arg Gly Leu Glu Val Trp Asn Ser Ile Pro Ser Cys Trp Ala
175 180 185

Leu Pro Trp Leu Asn Val Ser Ala Asp Gly Asp Asn Val His Leu Val
190 195 200

Leu Asn Val Ser Glu Glu Gln His Phe Gly Leu Ser Leu Tyr Trp Asn
205 210 215 220

Gln Val Gln Gly Pro Pro Lys Pro Arg Trp His Lys Asn Leu Thr Gly
225 230 235

Pro Gln Ile Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys Leu Cys
240 245 250

Ile Gln Val Trp Pro Leu Glu Pro Asp Ser Val Arg Thr Asn Ile Cys
255 260 265

Pro Phe Arg Glu Asp Pro Arg Ala His Gln Asn Leu Trp Gln Ala Ala
270 275 280

Arg Leu Arg Leu Leu Thr Leu Gln Ser Trp Leu Leu Asp Ala Pro Cys

285

290

295

300

Ser Leu Pro Ala Glu Ala Ala Leu Cys Trp Arg Ala Pro Gly Gly Asp
305 310 315

Pro Cys Gln Pro Leu Val Pro Pro Leu Ser Trp Glu Asn Val Thr Val
320 325 330

Asp Val Asn Ser Ser Glu Lys Leu Gln Leu Gln Glu Cys Leu Trp Ala
335 340 345

Asp Ser Leu Gly Pro Leu Lys Asp Asp Val Leu Leu Leu Glu Thr Arg
350 355 360

Gly Pro Gln Asp Asn Arg Ser Leu Cys Ala Leu Glu Pro Ser Gly Cys
365 370 375 380

Thr Ser Leu Pro Ser Lys Ala Ser Thr Arg Ala Ala Arg Leu Gly Glu
385 390 395

Tyr Leu Leu Gln Asp Leu Gln Ser Gly Gln Cys Leu Gln Leu Trp Asp
400 405 410

Asp Asp Leu Gly Ala Leu Trp Ala Cys Pro Met Asp Lys Tyr Ile His
415 420 425

Lys Arg Trp Ala Leu Val Trp Leu Ala Cys Leu Leu Phe Ala Ala Ala
430 435 440

Leu Ser Leu Ile Leu Leu Lys Lys Asp His Ala Lys Gly Trp Leu
445 450 455 460

Arg Leu Leu Lys Gln Asp Val Arg Ser Gly Ala Ala Ala Arg Gly Arg
465 470 475

Ala Ala Leu Leu Tyr Ser Ala Asp Asp Ser Gly Phe Glu Arg Leu
480 485 490

Val Gly Ala Leu Ala Ser Ala Leu Cys Gln Leu Pro Leu Arg Val Ala
495 500 505

Val Asp Leu Trp Ser Arg Arg Glu Leu Ser Ala Gln Gly Pro Val Ala
510 515 520

Trp Phe His Ala Gln Arg Arg Gln Thr Leu Gln Glu Gly Gly Val Val
525 530 535 540

Val Leu Leu Phe Ser Pro Gly Ala Val Ala Leu Cys Ser Glu Trp Leu
545 550 555

Gln Asp Gly Val Ser Gly Pro Gly Ala His Gly Pro His Asp Ala Phe
560 565 570

Arg Ala Ser Leu Ser Cys Val Leu Pro Asp Phe Leu Gln Gly Arg Ala
575 580 585

Pro Gly Ser Tyr Val Gly Ala Cys Phe Asp Arg Leu Leu His Pro Asp
590 595 600

Ala Val Pro Ala Leu Phe Arg Thr Val Pro Val Phe Thr Leu Pro Ser
605 610 615 620

Gln Leu Pro Asp Phe Leu Gly Ala Leu Gln Gln Pro Arg Ala Pro Arg
625 630 635

Ser Gly Arg Leu Gln Glu Arg Ala Glu Gln Val Ser Arg Ala Leu Gln
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ctgtccggca cctggaag atg cct gtg tcc tgg ttc ctg ctg tcc ttg gca 231
Met Pro Val Ser Trp Phe Leu Leu Ser Leu Ala

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ctg ggc cga aac cct gtg gtc gtc tct ctg gag aga ctg atg gag cct Leu Gly Arg Asn Pro Val Val Val Ser Leu Glu Arg Leu Met Glu Pro	-5	-1	1	279
cag gac act gca cgc tgc tct cta ggc ctc tcc tgc cac ctc tgg gat Gln Asp Thr Ala Arg Cys Ser Leu Gly Leu Ser Cys His Leu Trp Asp	10	15	20	327
ggg gac gtg ctc tgc ctg cct gga agc ctc cag tct gcc cca ggc cct Gly Asp Val Leu Cys Leu Pro Gly Ser Leu Gln Ser Ala Pro Gly Pro	25	30	35	375
gtg cta gtg cct acc cgc ctg cag acg gag ctg gtg ctg agg tgt cca Val Leu Val Pro Thr Arg Leu Gln Thr Glu Leu Val Leu Arg Cys Pro	40	45	50	423
cag aag aca gat tgc gcc ctc tgt gtc cgt gtg gtc cac ttg gcc Gln Lys Thr Asp Cys Ala Leu Cys Val Arg Val Val His Leu Ala	60	65	70	471
gtg cat ggg cac tgg gca gag cct gaa gaa gct gga aag tct gat tca Val His Gly His Trp Ala Glu Pro Glu Glu Ala Gly Lys Ser Asp Ser	75	80	85	519
gaa ctc cag gag tct agg aac gcc tct ctc cag gcc cag gtg gtg ctc Glu Leu Gln Glu Ser Arg Asn Ala Ser Leu Gln Ala Gln Val Val Leu	90	95	100	567
tcc ttc cag gcc tac ccc atc gcc cgc tgt gcc ctg ctg gag gtc cag Ser Phe Gln Ala Tyr Pro Ile Ala Arg Cys Ala Leu Leu Glu Val Gln	105	110	115	615
gtg ccc gct gac ctg gtg cag cct ggt cag tcc gtg ggt tct gct gta Val Pro Ala Asp Leu Val Gln Pro Gly Gln Ser Val Gly Ser Ala Val	120	125	130	663
ttt gac tgt ttc gag gct agt ctt ggg gct gag gta cag atc tgg tcc Phe Asp Cys Phe Glu Ala Ser Leu Gly Ala Glu Val Gln Ile Trp Ser	140	145	150	711
tac acg aag ccc agg tac cag aaa gag ctc aac ctc aca cag cag ctg Tyr Thr Lys Pro Arg Tyr Gln Lys Glu Leu Asn Leu Thr Gln Gln Leu	155	160	165	759
cct gac tgc agg ggt ctt gaa gtc cgg gac agc atc cag agc tgc tgg Pro Asp Cys Arg Gly Leu Glu Val Arg Asp Ser Ile Gln Ser Cys Trp	170	175	180	807
gtc ctg ccc tgg ctc aat gtg tct aca gat ggt gac aat gtc ctt ctg Val Leu Pro Trp Leu Asn Val Ser Thr Asp Gly Asp Asn Val Leu Leu	185	190	195	855
aca ctg gat gtc tct gag gag cag gac ttt agc ttc tta ctg tac ctg Thr Leu Asp Val Ser Glu Glu Gln Asp Phe Ser Phe Leu Leu Tyr Leu	200	205	210	903
cgt cca gtc ccc gat gct ctc aaa tcc ttg tgg tac aaa aac ctg act Arg Pro Val Pro Asp Ala Leu Lys Ser Leu Trp Tyr Lys Asn Leu Thr	220	225	230	951

gga cct cag aac att act tta aac cac aca gac ctg gtt ccc tgc ctc Gly Pro Gln Asn Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys Leu 235 240 245	999
tgc att cag gtg tgg tcg cta gag cca gac tct gag agg gtc gaa ttc Cys Ile Gln Val Trp Ser Leu Glu Pro Asp Ser Glu Arg Val Glu Phe 250 255 260	1047
tgc ccc ttc cgg gaa gat ccc ggt gca cac agg aac ctc tgg cac ata Cys Pro Phe Arg Glu Asp Pro Gly Ala His Arg Asn Leu Trp His Ile 265 270 275	1095
gcc agg ctg cgg gta ctg tcc cca ggg gta tgg cag cta gat gcg cct Ala Arg Leu Arg Val Leu Ser Pro Gly Val Trp Gln Leu Asp Ala Pro 280 285 290 295	1143
tgc tgt ctg ccg ggc aag gta aca ctg tgc tgg cag gca cca gac cag Cys Cys Leu Pro Gly Lys Val Thr Leu Cys Trp Gln Ala Pro Asp Gln 300 305 310	1191
agt ccc tgc cag cca ctt gtg cca cca gtg ccc cag aag aac gcc act Ser Pro Cys Gln Pro Leu Val Pro Pro Val Pro Gln Lys Asn Ala Thr 315 320 325	1239
gtg aat gag cca caa gat ttc cag ttg gtg gca ggc cac ccc aac ctc Val Asn Glu Pro Gln Asp Phe Gln Leu Val Ala Gly His Pro Asn Leu 330 335 340	1287
tgt gtc cag gtg agc acc tgg gag aag gtt cag ctg caa gcg tgc ttg Cys Val Gln Val Ser Thr Trp Glu Lys Val Gln Leu Gln Ala Cys Leu 345 350 355	1335
tgg gct gac tcc ttg ggg ccc ttc aag gat gat atg ctg tta gtg gag Trp Ala Asp Ser Leu Gly Pro Phe Lys Asp Asp Met Leu Leu Val Glu 360 365 370 375	1383
atg aaa acc ggc ctc aac aac aca tca gtc tgt gcc ttg gaa ccc agt Met Lys Thr Gly Leu Asn Asn Thr Ser Val Cys Ala Leu Glu Pro Ser 380 385 390	1431
ggc tgt aca cca ctg ccc agc atg gcc tcc acg aga gct gct cgc ctg Gly Cys Thr Pro Leu Pro Ser Met Ala Ser Thr Arg Ala Ala Arg Leu 395 400 405	1479
gga gag gag ttg ctg caa gac ttc cga tca cac cag tgt atg cag ctg Gly Glu Glu Leu Leu Gln Asp Phe Arg Ser His Gln Cys Met Gln Leu 410 415 420	1527
tgg aac gat gac aac atg gga tcg cta tgg gcc tgc ccc atg gac aag Trp Asn Asp Asp Asn Met Gly Ser Leu Trp Ala Cys Pro Met Asp Lys 425 430 435	1575
tac atc cac agg cgc tgg gtc cta gta tgg ctg gcc tgc cta ctc ttg Tyr Ile His Arg Arg Trp Val Leu Val Trp Leu Ala Cys Leu Leu Leu 440 445 450 455	1623
gct gcg gcg ctt ttc ttc ctc ctt cta aaa aag gac cgc agg aaa Ala Ala Ala Leu Phe Phe Leu Leu Leu Lys Lys Asp Arg Arg Lys 460 465 470	1671

gcg gcc cgt ggc tcc cgc acg gcc ttg ctc ctc cac tcc gcc gac gga Ala Ala Arg Gly Ser Arg Thr Ala Leu Leu Leu His Ser Ala Asp Gly 475 480 485	1719
gcg ggc tac gag cgc ctg gtg gga gca ctg gcg tcc gcg ttg agc cag Ala Gly Tyr Glu Arg Leu Val Gly Ala Leu Ala Ser Ala Leu Ser Gln 490 495 500	1767
atg cca ctg cgc gtg gcc gtg gac ctg tgg agc cgc cgc gag ctg agc Met Pro Leu Arg Val Ala Val Asp Leu Trp Ser Arg Arg Glu Leu Ser 505 510 515	1815
gcg cac gga gcc cta gcc tgg ttc cac cac cag cga cgc cgt atc ctg Ala His Gly Ala Leu Ala Trp Phe His His Gln Arg Arg Arg Ile Leu 520 525 530 535	1863
cag gag ggt ggc gtg gta atc ctt ctc ttc tcg ccc gcg gcc gtg gcg Gln Glu Gly Gly Val Val Ile Leu Leu Phe Ser Pro Ala Ala Val Ala 540 545 550	1911
cag tgt cag cag tgg ctg cag ctc cag aca gtg gag ccc ggg ccg cat Gln Cys Gln Gln Trp Leu Gln Leu Gln Thr Val Glu Pro Gly Pro His 555 560 565	1959
gac gcc ctc gcc gcc tgg ctc agc tgc gtg cta ccc gat ttc ctg caa Asp Ala Leu Ala Ala Trp Leu Ser Cys Val Leu Pro Asp Phe Leu Gln 570 575 580	2007
ggc cgg gcg acc ggc cgc tac gtc ggg gtc tac ttc gac ggg ctg ctg Gly Arg Ala Thr Gly Arg Tyr Val Gly Val Tyr Phe Asp Gly Leu Leu 585 590 595	2055
cac cca gac tct gtg ccc tcc ccg ttc cgc gtc gcc ccg ctc ttc tcc His Pro Asp Ser Val Pro Ser Pro Phe Arg Val Ala Pro Leu Phe Ser 600 605 610 615	2103
ctg ccc tcg cag ctg ccg gct ttc ctg gat gca ctg cag gga ggc tgc Leu Pro Ser Gln Leu Pro Ala Phe Leu Asp Ala Leu Gln Gly Gly Cys 620 625 630	2151
tcc act tcc gcg ggg cga ccc gcg gac ccg gtg gaa cga gtg acc cag Ser Thr Ser Ala Gly Arg Pro Ala Asp Arg Val Glu Arg Val Thr Gln 635 640 645	2199
gcg ctg cgg tcc gcc ctg gac agc tgt act tct agc tcg gaa gcc cca Ala Leu Arg Ser Ala Leu Asp Ser Cys Thr Ser Ser Glu Ala Pro 650 655 660	2247
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-1 1 5 10

Cys Ser Leu Gly Leu Ser Cys His Leu Trp Asp Gly Asp Val Leu Cys
15 20 25

Leu Pro Gly Ser Leu Gln Ser Ala Pro Gly Pro Val Leu Val Pro Thr
30 35 40

Arg Leu Gln Thr Glu Leu Val Leu Arg Cys Pro Gln Lys Thr Asp Cys
45 50 55 60

Ala Leu Cys Val Arg Val Val His Leu Ala Val His Gly His Trp
65 70 75

Ala Glu Pro Glu Glu Ala Gly Lys Ser Asp Ser Glu Leu Gln Glu Ser
80 85 90

Arg Asn Ala Ser Leu Gln Ala Gln Val Val Leu Ser Phe Gln Ala Tyr
95 100 105

Pro Ile Ala Arg Cys Ala Leu Leu Glu Val Gln Val Pro Ala Asp Leu
110 115 120

Val Gln Pro Gly Gln Ser Val Gly Ser Ala Val Phe Asp Cys Phe Glu
125 130 135 140

Ala Ser Leu Gly Ala Glu Val Gln Ile Trp Ser Tyr Thr Lys Pro Arg
145 150 155

Tyr Gln Lys Glu Leu Asn Leu Thr Gln Gln Leu Pro Asp Cys Arg Gly
160 165 170

Leu Glu Val Arg Asp Ser Ile Gln Ser Cys Trp Val Leu Pro Trp Leu
175 180 185

Asn Val Ser Thr Asp Gly Asp Asn Val Leu Leu Thr Leu Asp Val Ser
190 195 200

Glu Glu Gln Asp Phe Ser Phe Leu Leu Tyr Leu Arg Pro Val Pro Asp
205 210 215 220

Ala Leu Lys Ser Leu Trp Tyr Lys Asn Leu Thr Gly Pro Gln Asn Ile
225 230 235

Thr Leu Asn His Thr Asp Leu Val Pro Cys Leu Cys Ile Gln Val Trp
240 245 250

Ser Leu Glu Pro Asp Ser Glu Arg Val Glu Phe Cys Pro Phe Arg Glu.
255 260 265

Asp Pro Gly Ala His Arg Asn Leu Trp His Ile Ala Arg Leu Arg Val
270 275 280

Leu Ser Pro Gly Val Trp Gln Leu Asp Ala Pro Cys Cys Leu Pro Gly
285 290 295 300

Lys Val Thr Leu Cys Trp Gln Ala Pro Asp Gln Ser Pro Cys Gln Pro
305 310 315

Leu Val Pro Pro Val Pro Gln Lys Asn Ala Thr Val Asn Glu Pro Gln
320 325 330

Asp Phe Gln Leu Val Ala Gly His Pro Asn Leu Cys Val Gln Val Ser
335 340 345

Thr Trp Glu Lys Val Gln Leu Gln Ala Cys Leu Trp Ala Asp Ser Leu
350 355 360

Gly Pro Phe Lys Asp Asp Met Leu Leu Val Glu Met Lys Thr Gly Leu
365 370 375 380

Asn Asn Thr Ser Val Cys Ala Leu Glu Pro Ser Gly Cys Thr Pro Leu
385 390 395

Pro Ser Met Ala Ser Thr Arg Ala Ala Arg Leu Gly Glu Glu Leu Leu
400 405 410

Gln Asp Phe Arg Ser His Gln Cys Met Gln Leu Trp Asn Asp Asp Asn
415 420 425

Met Gly Ser Leu Trp Ala Cys Pro Met Asp Lys Tyr Ile His Arg Arg
430 435 440

Trp Val Leu Val Trp Leu Ala Cys Leu Leu Leu Ala Ala Ala Leu Phe
445 450 455 460

Phe Phe Leu Leu Lys Lys Asp Arg Arg Lys Ala Ala Arg Gly Ser

465

470

475

Arg Thr Ala Leu Leu Leu His Ser Ala Asp Gly Ala Gly Tyr Glu Arg
480 485 490

Leu Val Gly Ala Leu Ala Ser Ala Leu Ser Gln Met Pro Leu Arg Val
495 500 505

Ala Val Asp Leu Trp Ser Arg Arg Glu Leu Ser Ala His Gly Ala Leu
510 515 520

Ala Trp Phe His His Gln Arg Arg Arg Ile Leu Gln Glu Gly Gly Val
525 530 535 540

Val Ile Leu Leu Phe Ser Pro Ala Ala Val Ala Gln Cys Gln Gln Trp
545 550 555

Leu Gln Leu Gln Thr Val Glu Pro Gly Pro His Asp Ala Leu Ala Ala
560 565 570

Trp Leu Ser Cys Val Leu Pro Asp Phe Leu Gln Gly Arg Ala Thr Gly
575 580 585

Arg Tyr Val Gly Val Tyr Phe Asp Gly Leu Leu His Pro Asp Ser Val
590 595 600

Pro Ser Pro Phe Arg Val Ala Pro Leu Phe Ser Leu Pro Ser Gln Leu
605 610 615 620

Pro Ala Phe Leu Asp Ala Leu Gln Gly Gly Cys Ser Thr Ser Ala Gly
625 630 635

Arg Pro Ala Asp Arg Val Glu Arg Val Thr Gln Ala Leu Arg Ser Ala
640 645 650

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655 660 665

Trp Asp Leu Gly Pro Cys Thr Thr Leu Glu
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    Met Ala Pro Trp Leu Gln Leu Cys Ser Val Phe Phe Thr Val 111
    -15           -10           -5

aac gcc tgc ctc aac ggc tcg cag ctg gct gtn gcc gct ggc ggg tcc
Asn Ala Cys Leu Asn Gly Ser Gln Leu Ala Val Ala Ala Gly Gly Ser 159
    -1   1           5           10

ggc cgc gcg cng ggc gcc gac acc tgt agc tgg ang gga gtg ggg cca
Gly Arg Ala Xaa Gly Ala Asp Thr Cys Ser Trp Xaa Gly Val Gly Pro 207
    15           20           25           30

gcc agc aga aac agt ggg ctg tac aac atc acc ttc aaa tat gac aat
Ala Ser Arg Asn Ser Gly Leu Tyr Asn Ile Thr Phe Lys Tyr Asp Asn 255
    35           40           45

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tgt acc acc tac ttg aat cca gtg ggg aag cat gtg att gct gac gcc Cys Thr Thr Tyr Leu Asn Pro Val Gly Lys His Val Ile Ala Asp Ala 50 55 60	303
cag aat atc acc atc agc cag tat gct tgc cat gac caa gtg gca gtc Gln Asn Ile Thr Ile Ser Gln Tyr Ala Cys His Asp Gln Val Ala Val 65 70 75	351
acc att ctt tgg tcc cca ggg gcc ctc ggc atc gaa ttc ctg aaa gga Thr Ile Leu Trp Ser Pro Gly Ala Leu Gly Ile Glu Phe Leu Lys Gly 80 85 90	399
ttt cgg gta ata ctg gag gag ctg aag tcg gag gga aga cag ngc caa Phe Arg Val Ile Leu Glu Glu Leu Lys Ser Glu Gly Arg Gln Xaa Gln 95 100 105 110	447
caa ctg att cta aag gat ccg aag cag ntc aac agt agc ttc aaa aga Gln Leu Ile Leu Lys Asp Pro Lys Gln Xaa Asn Ser Ser Phe Lys Arg 115 120 125	495
act gga atg gaa tct caa cct ttn ctg aat atg aaa ttt gaa acg gat Thr Gly Met Glu Ser Gln Pro Xaa Leu Asn Met Lys Phe Glu Thr Asp 130 135 140	543
tat ttc gta agg ttg tcc ttt tcc ttc att aaa aac gaa agc aat tac Tyr Phe Val Arg Leu Ser Phe Ser Ile Lys Asn Glu Ser Asn Tyr 145 150 155	591
cac cct ttc ttc ttt aga acc cga gcc tgt gac ctg ttg tta cag ccg His Pro Phe Phe Arg Thr Arg Ala Cys Asp Leu Leu Leu Gln Pro 160 165 170	639
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aac ttc ggc ttc cgt ttc tat ctt cac tac aag ctc aag cac gaa Asn Phe Gly Phe Arg Phe Tyr Leu His Tyr Lys Leu Lys His Glu 210 215 220	783
gga cct ttc aag cga aag acc tgt aag cag gag caa act aca gag atg Gly Pro Phe Lys Arg Lys Thr Cys Lys Gln Glu Gln Thr Thr Glu Met 225 230 235	831
acc agc tgc ctc ctt caa aat gtt tct cca ggg gat tat ata att gag Thr Ser Cys Leu Leu Gln Asn Val Ser Pro Gly Asp Tyr Ile Ile Glu 240 245 250	879
ctg gtg gat gac act aac aca aca aga aaa gtg atg cat tat gcc tta Leu Val Asp Asp Thr Asn Thr Arg Lys Val Met His Tyr Ala Leu 255 260 265 270	927
aag cca gtg cac tcc ccg tgg gcc ggg ccc atc aga gca gtg gcc atc Lys Pro Val His Ser Pro Trp Ala Gly Pro Ile Arg Ala Val Ala Ile 275 280 285	975

aca gtg cca ctg gta gtc ata tcg gca ttc gcg acg ctc ttc act gtg	1023		
Thr Val Pro Leu Val Val Ile Ser Ala Phe Ala Thr Leu Phe Thr Val			
290	295	300	
atg tgc cgc aag aag caa caa gaa aat ata tat tca cat tta gat gaa	1071		
Met Cys Arg Lys Lys Gln Gln Glu Asn Ile Tyr Ser His Leu Asp Glu			
305	310	315	
gag agc tct gag tct tcc aca tac act gca gca ctc cca aga gag agg	1119		
Glu Ser Ser Glu Ser Ser Thr Tyr Thr Ala Ala Leu Pro Arg Glu Arg			
320	325	330	
ctc cgg ccg cgg ccg aag gtc ttt ctc tgc tat tcc agt aaa gat ggc	1167		
Leu Arg Pro Arg Pro Lys Val Phe Leu Cys Tyr Ser Ser Lys Asp Gly			
335	340	345	350
cag aat cac atg aat gtc gtc cag tgt ttc gcc tac ttc ctc cag gac	1215		
Gln Asn His Met Asn Val Val Gln Cys Phe Ala Tyr Phe Leu Gln Asp			
355	360	365	
ttc tgt ggc tgt gag gtg gct ctg gac ctg tgg gaa gac ttc agc ctc	1263		
Phe Cys Gly Cys Glu Val Ala Leu Asp Leu Trp Glu Asp Phe Ser Leu			
370	375	380	
tgt aga gaa ggg cag aga gaa tgg gtc atc cag aag atc cac gag tcc	1311		
Cys Arg Glu Gly Gln Arg Glu Trp Val Ile Gln Lys Ile His Glu Ser			
385	390	395	
cag ttc atc att gtg gtt tgt tcc aaa ggt atg aag tac ttt gtg gac	1359		
Gln Phe Ile Ile Val Val Cys Ser Lys Gly Met Lys Tyr Phe Val Asp			
400	405	410	
aag aag aac tac aaa cac aaa gga ggt ggc cga ggc tcg ggg aaa gga	1407		
Lys Lys Asn Tyr Lys His Lys Gly Gly Arg Gly Ser Gly Lys Gly			
415	420	425	430
gag ctc ttc ctg gtg gcg gtg tca gcc att gcc gaa aag ctc cgc cag	1455		
Glu Leu Phe Leu Val Ala Val Ser Ala Ile Ala Glu Lys Leu Arg Gln			
435	440	445	
gcc aag cag agt tcg tcc gcg gcg ctc agc aag ttt atc gcc gtc tac	1503		
Ala Lys Gln Ser Ser Ala Ala Leu Ser Lys Phe Ile Ala Val Tyr			
450	455	460	
ttt gat tat tcc tgc gag gga gac gtc ccc ggt atc cta gac ctg agt	1551		
Phe Asp Tyr Ser Cys Glu Gly Asp Val Pro Gly Ile Leu Asp Leu Ser			
465	470	475	
acc aag tac aga ctc atg gac aat ctt cct cag ctc tgt tcc cac ctg	1599		
Thr Lys Tyr Arg Leu Met Asp Asn Leu Pro Gln Leu Cys Ser His Leu			
480	485	490	
cac tcc cga gac cac ggc ctc cag gag ccg ggg cag cac acg cga cag	1647		
His Ser Arg Asp His Gly Leu Gln Glu Pro Gly Gln His Thr Arg Gln			
495	500	505	510
ggc agc aga agg aac tac ttc cgg agc aag tca ggc ccg tcc cta tac	1695		
Gly Ser Arg Arg Asn Tyr Phe Arg Ser Lys Ser Gly Arg Ser Leu Tyr			
515	520	525	
gtc gcc att tgc aac atg cac cag ttt att gac gag gag ccc gac tgg	1743		

Val Ala Ile Cys Asn Met His Gln Phe Ile Asp Glu Glu Pro Asp Trp			
530	535	540	
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Phe Glu Lys Gln Phe Val Pro Phe His Pro Pro Pro Leu Arg Tyr Arg			
545	550	555	
gag cca gtc ttg gag aaa ttt gat tcg ggc ttg gtt tta aat gat gtc			1839
Glu Pro Val Leu Glu Lys Phe Asp Ser Gly Leu Val Leu Asn Asp Val			
560	565	570	
atg tgc aaa cca ggg cct gag agt gac ttc tgc cta aag gta gag gcg			1887
Met Cys Lys Pro Gly Pro Glu Ser Asp Phe Cys Leu Lys Val Glu Ala			
575	580	585	590
gct gtt ctt ggg gca acc gga cca gcc gac tcc cag cac gag agt cag			1935
Ala Val Leu Gly Ala Thr Gly Pro Ala Asp Ser Gln His Glu Ser Gln			
595	600	605	
cat ggg ggc ctg gac caa gac ggg gag gcc cgg cct gcc ctt gac ggt			1983
His Gly Gly Leu Asp Gln Asp Gly Glu Ala Arg Pro Ala Leu Asp Gly			
610	615	620	
agc gcc gcc ctg caa ccc ctg ctg cac acg gtg aaa gcc ggc agc ccc			2031
Ser Ala Ala Leu Gln Pro Leu Leu His Thr Val Lys Ala Gly Ser Pro			
625	630	635	
tcg gac atg ccg cgg gac tca ggc atc tat gac tcg tct gtg ccc tca			2079
Ser Asp Met Pro Arg Asp Ser Gly Ile Tyr Asp Ser Ser Val Pro Ser			
640	645	650	
tcc gag ctg tct ctg cca ctg atg gaa gga ctc tcg acg gac cag aca			2127
Ser Glu Leu Ser Leu Pro Leu Met Glu Gly Leu Ser Thr Asp Gln Thr			
655	660	665	670
gaa acg tct tcc ctg acg gag agc gtg tcc tcc tct tca ggc ctg ggt			2175
Glu Thr Ser Ser Leu Thr Glu Ser Val Ser Ser Ser Gly Leu Gly			
675	680	685	
gag gag gaa cct cct gcc ctt cct tcc aag ctc ctc tct tct ggg tca			2223
Glu Glu Glu Pro Pro Ala Leu Pro Ser Lys Leu Leu Ser Ser Gly Ser			
690	695	700	
tgc aaa gca gat ctt ggt tgc cgc agc tac act gat gaa ctc cac gcg			2271
Cys Lys Ala Asp Leu Gly Cys Arg Ser Tyr Thr Asp Glu Leu His Ala			
705	710	715	
gtc gcc cct ttg taacaaaacg aaagagtcta agcattgcc a ctttagctgc			2323
Val Ala Pro Leu			
720			
tgcctccctc tgattccccca gctcatctcc ctgggtgcat ggcccaacttg gagctgaggt			2383
ctcataacaag gatatttgg a gtgaaatgct ggccagtaact tgttctccct tgcccccaacc			2443
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catgtccata aggtctgaca acagcttgcc aaatttgggtt agtccttgg a tcagagcctg			2563
ttgtgggagg tagggaggaa atatgtaaag aaaaacagga agataacctgc actaatcatt			2623

cagacttcat tgagctctgc aaactttgcc tgtttgctat tggctacctt gatttgaat 2683
gctttgtgaa aaaaggcact tttaacatca tagccacaga aatcaagtgc cagtctatct 2743
ggaatccatg ttgtattgca gataatgttc tcatttattt ttg 2786

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<213> Homo sapiens

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<223> The 'Xaa' at location 18 stands for Gln, Arg, Pro, or Leu.

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<222> (26)..(26)
<223> The 'Xaa' at location 26 stands for Lys, Arg, Thr, or Met.

<220>
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<222> (109)..(109)
<223> The 'Xaa' at location 109 stands for Ser, Gly, Arg, or Cys.

<220>
<221> misc_feature
<222> (120)..(120)
<223> The 'Xaa' at location 120 stands for Ile, Val, Leu, or Phe.

<220>
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<223> The 'Xaa' at location 134 stands for Leu, or Phe.

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Cys Leu Asn Gly Ser Gln Leu Ala Val Ala Ala Gly Gly Ser Gly Arg
1 5 10 15

Ala Xaa Gly Ala Asp Thr Cys Ser Trp Xaa Gly Val Gly Pro Ala Ser
20 25 30

Arg Asn Ser Gly Leu Tyr Asn Ile Thr Phe Lys Tyr Asp Asn Cys Thr
35 40 45

Thr Tyr Leu Asn Pro Val Gly Lys His Val Ile Ala Asp Ala Gln Asn
50 55 60

Ile Thr Ile Ser Gln Tyr Ala Cys His Asp Gln Val Ala Val Thr Ile
65 70 75 80

Leu Trp Ser Pro Gly Ala Leu Gly Ile Glu Phe Leu Lys Gly Phe Arg
85 90 95

Val Ile Leu Glu Glu Leu Lys Ser Glu Gly Arg Gln Xaa Gln Gln Leu
100 105 110

Ile Leu Lys Asp Pro Lys Gln Xaa Asn Ser Ser Phe Lys Arg Thr Gly
115 120 125

Met Glu Ser Gln Pro Xaa Leu Asn Met Lys Phe Glu Thr Asp Tyr Phe
130 135 140

Val Arg Leu Ser Phe Ser Phe Ile Lys Asn Glu Ser Asn Tyr His Pro
145 150 155 160

Phe Phe Phe Arg Thr Arg Ala Cys Asp Leu Leu Leu Gln Pro Asp Asn
165 170 175

Leu Ala Cys Lys Pro Phe Trp Lys Pro Arg Asn Leu Asn Ile Ser Gln
180 185 190

His Gly Ser Asp Met Gln Val Ser Phe Asp His Ala Pro His Asn Phe
195 200 205

Gly Phe Arg Phe Phe Tyr Leu His Tyr Lys Leu Lys His Glu Gly Pro
210 215 220

Phe Lys Arg Lys Thr Cys Lys Gln Glu Gln Thr Thr Glu Met Thr Ser
225 230 235 240

Cys Leu Leu Gln Asn Val Ser Pro Gly Asp Tyr Ile Ile Glu Leu Val
245 250 255

Asp Asp Thr Asn Thr Arg Lys Val Met His Tyr Ala Leu Lys Pro
260 265 270

Val His Ser Pro Trp Ala Gly Pro Ile Arg Ala Val Ala Ile Thr Val
275 280 285

Pro Leu Val Val Ile Ser Ala Phe Ala Thr Leu Phe Thr Val Met Cys
290 295 300

Arg Lys Lys Gln Gln Glu Asn Ile Tyr Ser His Leu Asp Glu Glu Ser
305 310 315 320

Ser Glu Ser Ser Thr Tyr Thr Ala Ala Leu Pro Arg Glu Arg Leu Arg
325 330 335

Pro Arg Pro Lys Val Phe Leu Cys Tyr Ser Ser Lys Asp Gly Gln Asn
340 345 350

His Met Asn Val Val Gln Cys Phe Ala Tyr Phe Leu Gln Asp Phe Cys
355 360 365

Gly Cys Glu Val Ala Leu Asp Leu Trp Glu Asp Phe Ser Leu Cys Arg
370 375 380

Glu Gly Gln Arg Glu Trp Val Ile Gln Lys Ile His Glu Ser Gln Phe
385 390 395 400

Ile Ile Val Val Cys Ser Lys Gly Met Lys Tyr Phe Val Asp Lys Lys
405 410 415

Asn Tyr Lys His Lys Gly Gly Arg Gly Ser Gly Lys Gly Glu Leu
420 425 430

Phe Leu Val Ala Val Ser Ala Ile Ala Glu Lys Leu Arg Gln Ala Lys
435 440 445

Gln Ser Ser Ser Ala Ala Leu Ser Lys Phe Ile Ala Val Tyr Phe Asp
450 455 460

Tyr Ser Cys Glu Gly Asp Val Pro Gly Ile Leu Asp Leu Ser Thr Lys
465 470 475 480

Tyr Arg Leu Met Asp Asn Leu Pro Gln Leu Cys Ser His Leu His Ser
485 490 495

Arg Asp His Gly Leu Gln Glu Pro Gly Gln His Thr Arg Gln Gly Ser
500 505 510

Arg Arg Asn Tyr Phe Arg Ser Lys Ser Gly Arg Ser Leu Tyr Val Ala
515 520 525

Ile Cys Asn Met His Gln Phe Ile Asp Glu Glu Pro Asp Trp Phe Glu
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Lys Gln Phe Val Pro Phe His Pro Pro Pro Leu Arg Tyr Arg Glu Pro
545 550 555 560

Val Leu Glu Lys Phe Asp Ser Gly Leu Val Leu Asn Asp Val Met Cys
565 570 575

Lys Pro Gly Pro Glu Ser Asp Phe Cys Leu Lys Val Glu Ala Ala Val
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Leu Gly Ala Thr Gly Pro Ala Asp Ser Gln His Glu Ser Gln His Gly
595 600 605

Gly Leu Asp Gln Asp Gly Glu Ala Arg Pro Ala Leu Asp Gly Ser Ala
610 615 620

Ala Leu Gln Pro Leu Leu His Thr Val Lys Ala Gly Ser Pro Ser Asp
625 630 635 640

Met Pro Arg Asp Ser Gly Ile Tyr Asp Ser Ser Val Pro Ser Ser Glu
645 650 655

Leu Ser Leu Pro Leu Met Glu Gly Leu Ser Thr Asp Gln Thr Glu Thr
660 665 670

Ser Ser Leu Thr Glu Ser Val Ser Ser Ser Ser Gly Leu Gly Glu Glu
675 680 685

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Pro Leu

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-20

-15

-10

gtc atc gac ctc tct gac tct gct ggg att ggc ttt cgc cac ctg ccc			96
Val Ile Asp Leu Ser Asp Ser Ala Gly Ile Gly Phe Arg His Leu Pro			
-5	-1	1	5
cac tgg aac acc cgc tgt cct ctg gcc tcc cac acg gaa gtt ctg cct			144
His Trp Asn Thr Arg Cys Pro Leu Ala Ser His Thr Glu Val Leu Pro			
10	15	20	25
ata tcc ctt gcc gca cct ggt ggg ccc tct tct cca caa agc ctt ggt			192
Ile Ser Leu Ala Ala Pro Gly Gly Pro Ser Ser Pro Gln Ser Leu Gly			
30	35	40	
gtg tgc gag tct ggc act gtt ccc gct gtt tgt gcc agc atc tgc tgt			240
Val Cys Glu Ser Gly Thr Val Pro Ala Val Cys Ala Ser Ile Cys Cys			
45	50	55	
cag gtg gct cag gtc ttc aac ggg gcc tct tcc acc tcc tgg tgc aga			288
Gln Val Ala Gln Val Phe Asn Gly Ala Ser Ser Thr Ser Trp Cys Arg			
60	65	70	
aat cca aaa agt ctt cca cat tca agt tct ata gga gac aca aga tgc			336
Asn Pro Lys Ser Leu Pro His Ser Ser Ser Ile Gly Asp Thr Arg Cys			
75	80	85	
cag cac ctc aga gga agc tgc tgc gtc gtc acc tgt ctg aga			384
Gln His Leu Leu Arg Gly Ser Cys Cys Leu Val Val Thr Cys Leu Arg			
90	95	100	105
aga gcc atc aca ttt cca tcc cct ccc cag aca tct ccc aca agg gac			432
Arg Ala Ile Thr Phe Pro Ser Pro Pro Gln Thr Ser Pro Thr Arg Asp			
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ttc gct cta aaa gga ccc aac ctt cggt atc cag aga cat ggg aaa gtc			480
Phe Ala Leu Lys Gly Pro Asn Leu Arg Ile Gln Arg His Gly Lys Val			
125	130	135	
ttc cca gat tgg act cac aaa ggc atg gag gtg ggc act ggg tac aac			528
Phe Pro Asp Trp Thr His Lys Gly Met Glu Val Gly Thr Gly Tyr Asn			
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agg aga tgg gtt cag ctg agt ggt gga ccc gag ttc tcc ttt gat ttg			576
Arg Arg Trp Val Gln Leu Ser Gly Gly Pro Glu Phe Ser Phe Asp Leu			
155	160	165	
ctg cct gag gcc cgg gct att cggt gtg acc ata tct tca ggc cct gag			624
Leu Pro Glu Ala Arg Ala Ile Arg Val Thr Ile Ser Ser Gly Pro Glu			
170	175	180	185
gtc agc gtg cgt ctt tgt cac cag tgg gca ctg gag tgt gaa gag ctg			672
Val Ser Val Arg Leu Cys His Gln Trp Ala Leu Glu Cys Glu Leu			
190	195	200	
agc agt ccc tat gat gtc cag aaa att gtg tct ggg ggc cac act gta			720
Ser Ser Pro Tyr Asp Val Gln Lys Ile Val Ser Gly Gly His Thr Val			
205	210	215	
gag ctg cct tat gaa ttc ctt ctg ccc tgt ctg tgc ata gag gca tcc			768
Glu Leu Pro Tyr Glu Phe Leu Leu Pro Cys Leu Cys Ile Glu Ala Ser			
220	225	230	

tac ctg caa gag gac act gtg agg cgc aaa aaa tgt ccc ttc cag agc Tyr Leu Gln Glu Asp Thr Val Arg Arg Lys Lys Cys Pro Phe Gln Ser 235 240 245	816
tgg cca gaa gcc tat ggc tcg gac ttc tgg aag tca gtg cac ttc act Trp Pro Glu Ala Tyr Gly Ser Asp Phe Trp Lys Ser Val His Phe Thr 250 255 260 265	864
gac tac agc cag cac act cag atg gtc atg gcc ctg aca ctc cgc tgc Asp Tyr Ser Gln His Thr Gln Met Val Met Ala Leu Thr Leu Arg Cys 270 275 280	912
cca ctg aag ctg gaa gct gcc ctc tgc cag agg cac gac tgg cat acc Pro Leu Lys Leu Glu Ala Ala Leu Cys Gln Arg His Asp Trp His Thr 285 290 295	960
ctt tgc aaa gac ctc ccg aat gcc acg gct cga gag tca gat ggg tgg Leu Cys Lys Asp Leu Pro Asn Ala Thr Ala Arg Glu Ser Asp Gly Trp 300 305 310	1008
tat gtt ttg gag aag gtg gac ctg cac ccc cag ctc tgc ttc aag gta Tyr Val Leu Glu Lys Val Asp Leu His Pro Gln Leu Cys Phe Lys Val 315 320 325	1056
caa cca tgg ttc tct ttt gga aac agc agc cat gtt gaa tgc ccc cac Gln Pro Trp Phe Ser Phe Gly Asn Ser Ser His Val Glu Cys Pro His 330 335 340 345	1104
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atc ctg gca ctg ctg gcc ctc ctc acc cta ctg ggt gtt gtt ctg gcc Ile Leu Ala Leu Leu Ala Leu Thr Leu Leu Gly Val Val Leu Ala 430 435 440	1392
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atc gtg gac ctg tgg gag ggg agg cac gtg g ^c g ^c g ^c gtg g ^g g ^g c ^c g ^t Ile Val Asp Leu Trp Glu Gly Arg His Val Ala Arg Val Gly Pro Leu 490 495 500 505	1584
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gtg ctg ctg ctg tgg agc g ^g c ^c g ^c g ^c g ^c a ^c t ^t c ^g c ^c g ^t a ^g c ^g g ^c c ^c Val Leu Leu Leu Trp Ser Gly Ala Asp Leu Arg Pro Val Ser Gly Pro 525 530 535	1680
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atc ccc c ^g c ^c c ^g ctg c ^c g ^c c ^c t ^a c ^c c ^t g ^c c ^t c ^c g ^c g ^a Ile Pro Pro Pro Leu Arg Ala Leu Pro Arg Tyr Arg Leu Leu Arg Asp 570 575 580 585	1824
ctg c ^c c ^g c ^t ctg c ^t c ^g g ^c g ^c g ^c a ^c g ^g c ^g c ^t t ^c g ^c a ^a g ^g g ^c Leu Pro Arg Leu Leu Arg Ala Leu Asp Ala Arg Pro Phe Ala Glu Ala 590 595 600	1872
acc agc tgg g ^g c ^c c ^t g ^g g ^g g ^c c ^g c ^g c ^a g ^g c ^a g ^g c ^c c ^t Thr Ser Trp Gly Arg Leu Gly Ala Arg Gln Arg Arg Gln Ser Arg Leu 605 610 615	1920
gag ctg tgc agc c ^g c ^t g ^a g ^a g ^a g ^c g ^c c ^t g ^c a ^g c ^a c ^t Glu Leu Cys Ser Arg Leu Glu Arg Glu Ala Ala Arg Leu Ala Asp Leu 620 625 630	1968
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His Trp Asn Thr Arg Cys Pro Leu Ala Ser His Thr Glu Val Leu Pro

10

15

20

25

Ile Ser Leu Ala Ala Pro Gly Gly Pro Ser Ser Pro Gln Ser Leu Gly
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Val Cys Glu Ser Gly Thr Val Pro Ala Val Cys Ala Ser Ile Cys Cys
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Gln Val Ala Gln Val Phe Asn Gly Ala Ser Ser Thr Ser Trp Cys Arg
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Asn Pro Lys Ser Leu Pro His Ser Ser Ser Ile Gly Asp Thr Arg Cys
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Gln His Leu Leu Arg Gly Ser Cys Cys Leu Val Val Thr Cys Leu Arg
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Arg Ala Ile Thr Phe Pro Ser Pro Pro Gln Thr Ser Pro Thr Arg Asp
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Phe Ala Leu Lys Gly Pro Asn Leu Arg Ile Gln Arg His Gly Lys Val
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Phe Pro Asp Trp Thr His Lys Gly Met Glu Val Gly Thr Gly Tyr Asn
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Glu Leu Pro Tyr Glu Phe Leu Leu Pro Cys Leu Cys Ile Glu Ala Ser
220 225 230

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Trp Pro Glu Ala Tyr Gly Ser Asp Phe Trp Lys Ser Val His Phe Thr
250 255 260 265

Asp Tyr Ser Gln His Thr Gln Met Val Met Ala Leu Thr Leu Arg Cys
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Gln Gln Leu Ile Leu His Phe Ser Ser Arg Met His Ala Thr Phe Ser
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Val Tyr Thr Val Ser Gln Val Trp Arg Ser Asp Val Gln Phe Ala Trp
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Lys His Leu Leu Cys Pro Asp Val Ser Tyr Arg His Leu Gly Leu Leu
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Ile Leu Ala Leu Leu Ala Leu Leu Thr Leu Leu Gly Val Val Leu Ala
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Leu Leu Leu His Ala Ala Asp Ser Glu Ala Gln Arg Arg Leu Val Gly
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Ala Leu Ala Glu Leu Leu Arg Ala Ala Leu Gly Gly Gly Arg Asp Val
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Pro Trp Leu Trp Ala Ala Arg Thr Arg Val Ala Arg Glu Gln Gly Thr
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Val Leu Leu Leu Trp Ser Gly Ala Asp Leu Arg Pro Val Ser Gly Pro
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Asp Pro Arg Ala Ala Pro Leu Leu Ala Leu Leu His Ala Ala Pro Arg
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Pro Leu Leu Leu Leu Ala Tyr Phe Ser Arg Leu Cys Ala Lys Gly Asp
555 560 565

Ile Pro Pro Pro Leu Arg Ala Leu Pro Arg Tyr Arg Leu Leu Arg Asp
570 575 580 585

Leu Pro Arg Leu Leu Arg Ala Leu Asp Ala Arg Pro Phe Ala Glu Ala
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Met Gly Ser Pro Arg Leu Ala Ala Leu Leu Leu 110
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Ser Glu Glu Ser His Arg Ile Ser Ile Pro Ser Ser Ala Ile Ser His	
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Ser Phe Asp Leu Leu Pro Glu Val Gln Ala Val Arg Val Thr Ile Pro	
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Cys Glu Asp Leu Ser Ser Pro Phe Asp Thr Gln Lys Ile Val Ser Gly	
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Gly His Thr Val Asp Leu Pro Tyr Glu Phe Leu Leu Pro Cys Met Cys	
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Ile Glu Ala Ser Tyr Leu Gln Glu Asp Thr Val Arg Arg Lys Ser Val	
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Pro Ser Arg Ala Gly Leu Lys Leu Met Ala Gln Thr Ser Gly Ser Gln	
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Ser Pro Pro Lys Phe Glu Asp Tyr Trp Arg His Arg Thr Pro Ala Ser
45 50 55

Phe Gln Arg Lys Leu Leu Gly Ser Pro Ser Leu Ser Glu Glu Ser His
60 65 70

Arg Ile Ser Ile Pro Ser Ser Ala Ile Ser His Arg Gly Gln Arg Thr
75 80 85

Lys Arg Ala Gln Pro Ser Ala Ala Glu Gly Arg Glu His Leu Pro Glu
90 95 100 105

Ala Gly Ser Gln Lys Cys Gly Pro Glu Phe Ser Phe Asp Leu Leu
110 115 120

Pro Glu Val Gln Ala Val Arg Val Thr Ile Pro Ala Gly Pro Lys Ala
125 130 135

Arg Val Arg Leu Cys Tyr Gln Trp Ala Leu Glu Cys Glu Asp Leu Ser
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Ser Pro Phe Asp Thr Gln Lys Ile Val Ser Gly Gly His Thr Val Asp
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Leu Gln Glu Asp Thr Val Arg Arg Lys Ser Val Pro Ser Arg Ala Gly
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Met Asn Arg Ser Ile Pro Val Glu Val Asp Glu Ser Glu Pro Tyr Pro
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Ser Gln Leu Leu Lys Pro Ile Pro Glu Tyr Ser Pro Glu Glu Ser
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Glu Pro Pro Ala Pro Asn Ile Arg Asn Met Ala Pro Asn Ser Leu Ser
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gca ccc aca atg ctt cac aat tcc tcc gga gac ttt tct caa gct cac 371
Ala Pro Thr Met Leu His Asn Ser Ser Gly Asp Phe Ser Gln Ala His
50 55 60
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Ser Thr Leu Lys Leu Ala Asn His Gln Arg Pro Val Ser Arg Gln Val
65 70 75 80
acc tgc ctg cgc act caa gtt ctg gag gac agt gaa gac agt ttc tgc 467
Thr Cys Leu Arg Thr Gln Val Leu Glu Asp Ser Glu Asp Ser Phe Cys
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Arg Arg His Pro Gly Leu Gly Lys Ala Phe Pro Ser Gly Cys Ser Ala
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Val Ser Glu Pro Ala Ser Glu Ser Val Val Gly Ala Leu Pro Ala Glu
115 120 125
cat cag ttt tca ttt atg gaa aaa cgt aat caa tgg ctg gta tct cag 611
His Gln Phe Ser Phe Met Glu Lys Arg Asn Gln Trp Leu Val Ser Gln
130 135 140
ctt tca gcg gct tct cct gac act ggc cat gac tca gac aaa tca gac 659

Leu Ser Ala Ala Ser Pro Asp Thr Gly His Asp Ser Asp Lys Ser Asp			
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caa agt tta cct aat gcc tca gca gac tcc ttg ggc ggt agc cag gag			707
Gln Ser Leu Pro Asn Ala Ser Ala Asp Ser Leu Gly Gly Ser Gln Glu			
165	170	175	
atg gtg caa cgg ccc cag cct cac agg aac cga gca ggc ctg gat ctg			755
Met Val Gln Arg Pro Gln Pro His Arg Asn Arg Ala Gly Leu Asp Leu			
180	185	190	
cca acc ata gac acg gga tat gat tcc cag ccc cag gat gtc ctg ggc			803
Pro Thr Ile Asp Thr Gly Tyr Asp Ser Gln Pro Gln Asp Val Leu Gly			
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atc agg cag ctg gaa agg ccc ctg ccc ctc acc tcc gtg tgt tac ccc			851
Ile Arg Gln Leu Glu Arg Pro Leu Pro Leu Thr Ser Val Cys Tyr Pro			
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Gln Asp Leu Pro Arg Pro Leu Arg Ser Arg Glu Phe Pro Gln Phe Glu			
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Pro Gln Arg Tyr Pro Ala Cys Ala Gln Met Leu Pro Pro Asn Leu Ser			
245	250	255	
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Pro His Ala Pro Trp Asn Tyr His Tyr His Cys Pro Gly Ser Pro Asp			
260	265	270	
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His Gln Val Pro Tyr Gly His Asp Tyr Pro Arg Ala Ala Tyr Gln Gln			
275	280	285	
gtg atc cag ccg gct ctg cct ggg cag ccc ctg cct gga gcc agt gtg			1091
Val Ile Gln Pro Ala Leu Pro Gly Gln Pro Leu Pro Gly Ala Ser Val			
290	295	300	
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Arg Gly Leu His Pro Val Gln Lys Val Ile Leu Asn Tyr Pro Ser Pro			
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Trp Asp Gln Glu Glu Arg Pro Ala Gln Arg Asp Cys Ser Phe Pro Gly			
325	330	335	
ctt cca agg cac cag gac cag cca cat cac cag cca cct aat aga gct			1235
Leu Pro Arg His Gln Asp Gln Pro His His Gln Pro Pro Asn Arg Ala			
340	345	350	
ggc gct cct ggg gag tcc ttg gag tgc cct gca gag ctg aga cca cag			1283
Gly Ala Pro Gly Glu Ser Leu Glu Cys Pro Ala Glu Leu Arg Pro Gln			
355	360	365	
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Val Pro Gln Pro Pro Ser Pro Ala Ala Val Pro Arg Pro Pro Ser Asn			
370	375	380	
cct cca gcc aga gga act cta aaa aca agc aat ttg cca gaa gaa ttg			1379
Pro Pro Ala Arg Gly Thr Leu Lys Thr Ser Asn Leu Pro Glu Glu Leu			

385	390	395	400	
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cgc tac ctt agg gat aag acc gtc atg ata atc gta gca atc agc ccc Arg Tyr Leu Arg Asp Lys Thr Val Met Ile Ile Val Ala Ile Ser Pro 450	455	460		1571
aaa tac aaa cag gac gtc gaa ggc gct gag tgg cag ctg gac gag gat Lys Tyr Lys Gln Asp Val Glu Gly Ala Glu Ser Gln Leu Asp Glu Asp 465	470	475	480	1619
gag cat ggc tta cat act aag tac att cat cga atg atg cag att gag Glu His Gly Leu His Thr Lys Tyr Ile His Arg Met Met Gln Ile Glu 485	490	495		1667
ttc ata aaa caa gga agc atg aat ttc aga ttc atc cct gtc ctc ttc Phe Ile Lys Gln Gly Ser Met Asn Phe Arg Phe Ile Pro Val Leu Phe 500	505	510		1715
cca aat gct aag aag gag cat gtc ccc acc tgg ctt cag aac act cat Pro Asn Ala Lys Lys Glu His Val Pro Thr Trp Leu Gln Asn Thr His 515	520	525		1763
gtc tac agc tgg ccc aag aat aaa aaa aac atc ctg ctg cgg ctg ctg Val Tyr Ser Trp Pro Lys Asn Lys Asn Ile Leu Leu Arg Leu Leu 530	535	540		1811
aga gag gaa gag tat gtc gct cct cca cgg ggg cct ctg ccc acc ctt Arg Glu Glu Glu Tyr Val Ala Pro Pro Arg Gly Pro Leu Pro Thr Leu 545	550	555	560	1859
cag gtc gtt ccc ttg tgacaccgtt catccccaga tcactgaggc caggccatgt Gln Val Val Pro Leu 565				1914
ttggggcctt gttctgacag cattctggct gaggctggtc ggtgcactc ctggctggtt				1974
tttttctgtt cctccccgag aggcctctg gccccccagga aacctgttgt gcagagctct				2034
tccccggaga cctccacaca ccctggcttt gaagtggagt ctgtgactgc tctgcattct				2094
ctgcttttaa aaaaaccatt gcaggtgcca gtgtcccata tgttcctcct gacagtttga				2154
tgtgtccatt ctgggcctct cagtgcctag caagtagata atgtaaggga tgtggcagca				2214
aatggaaatg actacaaaca ctctcctatc aatcacttca ggctacttt atgagttac				2274
cagatgctt gttatcctca gaccaaactg attcatgtac aaataataaa atgtttactc				2334
ttttgtaaaa aaaaaaaaaa aaaaaaaaaaag aaaaaaaaaaaa aaa				2377

<210> 16
<211> 565
<212> PRT
<213> Homo sapiens

<400> 16

Met Asn Arg Ser Ile Pro Val Glu Val Asp Glu Ser Glu Pro Tyr Pro
1 5 10 15

Ser Gln Leu Leu Lys Pro Ile Pro Glu Tyr Ser Pro Glu Glu Glu Ser
20 25 30

Glu Pro Pro Ala Pro Asn Ile Arg Asn Met Ala Pro Asn Ser Leu Ser
35 40 45

Ala Pro Thr Met Leu His Asn Ser Ser Gly Asp Phe Ser Gln Ala His
50 55 60

Ser Thr Leu Lys Leu Ala Asn His Gln Arg Pro Val Ser Arg Gln Val
65 70 75 80

Thr Cys Leu Arg Thr Gln Val Leu Glu Asp Ser Glu Asp Ser Phe Cys
85 90 95

Arg Arg His Pro Gly Leu Gly Lys Ala Phe Pro Ser Gly Cys Ser Ala
100 105 110

Val Ser Glu Pro Ala Ser Glu Ser Val Val Gly Ala Leu Pro Ala Glu
115 120 125

His Gln Phe Ser Phe Met Glu Lys Arg Asn Gln Trp Leu Val Ser Gln
130 135 140

Leu Ser Ala Ala Ser Pro Asp Thr Gly His Asp Ser Asp Lys Ser Asp
145 150 155 160

Gln Ser Leu Pro Asn Ala Ser Ala Asp Ser Leu Gly Gly Ser Gln Glu
165 170 175

Met Val Gln Arg Pro Gln Pro His Arg Asn Arg Ala Gly Leu Asp Leu
180 185 190

Pro Thr Ile Asp Thr Gly Tyr Asp Ser Gln Pro Gln Asp Val Leu Gly
195 200 205

Ile Arg Gln Leu Glu Arg Pro Leu Pro Leu Thr Ser Val Cys Tyr Pro
210 215 220

Gln Asp Leu Pro Arg Pro Leu Arg Ser Arg Glu Phe Pro Gln Phe Glu
225 230 235 240

Pro Gln Arg Tyr Pro Ala Cys Ala Gln Met Leu Pro Pro Asn Leu Ser
245 250 255

Pro His Ala Pro Trp Asn Tyr His Tyr His Cys Pro Gly Ser Pro Asp
260 265 270

His Gln Val Pro Tyr Gly His Asp Tyr Pro Arg Ala Ala Tyr Gln Gln
275 280 285

Val Ile Gln Pro Ala Leu Pro Gly Gln Pro Leu Pro Gly Ala Ser Val
290 295 300

Arg Gly Leu His Pro Val Gln Lys Val Ile Leu Asn Tyr Pro Ser Pro
305 310 315 320

Trp Asp Gln Glu Glu Arg Pro Ala Gln Arg Asp Cys Ser Phe Pro Gly
325 330 335

Leu Pro Arg His Gln Asp Gln Pro His His Gln Pro Pro Asn Arg Ala
340 345 350

Gly Ala Pro Gly Glu Ser Leu Glu Cys Pro Ala Glu Leu Arg Pro Gln
355 360 365

Val Pro Gln Pro Pro Ser Pro Ala Ala Val Pro Arg Pro Pro Ser Asn
370 375 380

Pro Pro Ala Arg Gly Thr Leu Lys Thr Ser Asn Leu Pro Glu Glu Leu
385 390 395 400

Arg Lys Val Phe Ile Thr Tyr Ser Met Asp Thr Ala Met Glu Val Val
405 410 415

Lys Phe Val Asn Phe Leu Leu Val Asn Gly Phe Gln Thr Ala Ile Asp
420 425 430

Ile Phe Glu Asp Arg Ile Arg Gly Ile Asp Ile Ile Lys Trp Met Glu
435 440 445

Arg Tyr Leu Arg Asp Lys Thr Val Met Ile Ile Val Ala Ile Ser Pro

450

455

460

Lys Tyr Lys Gln Asp Val Glu Gly Ala Glu Ser Gln Leu Asp Glu Asp
 465 470 475 480

Glu His Gly Leu His Thr Lys Tyr Ile His Arg Met Met Gln Ile Glu
 485 490 495

Phe Ile Lys Gln Gly Ser Met Asn Phe Arg Phe Ile Pro Val Leu Phe
 500 505 510

Pro Asn Ala Lys Lys Glu His Val Pro Thr Trp Leu Gln Asn Thr His
 515 520 525

Val Tyr Ser Trp Pro Lys Asn Lys Lys Asn Ile Leu Leu Arg Leu Leu
 530 535 540

Arg Glu Glu Glu Tyr Val Ala Pro Pro Arg Gly Pro Leu Pro Thr Leu
 545 550 555 560

Gln Val Val Pro Leu
 565

<210> 17
 <211> 1323
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (1)..(1026)

<400> 17
 cag gac ctc cct ggg cct ctg agg tcc agg gaa ttg cca cct cag ttt 48
 Gln Asp Leu Pro Gly Pro Leu Arg Ser Arg Glu Leu Pro Pro Gln Phe
 1 5 10 15

gaa ctt gag agg tat cca atg aac gcc cag ctg ctg ccg ccc cat cct 96
 Glu Leu Glu Arg Tyr Pro Met Asn Ala Gln Leu Leu Pro Pro His Pro
 20 25 30

tcc cca cag gcc cca tgg aac tgt cag tac tac tgc ccc gga ggg ccc 144
 Ser Pro Gln Ala Pro Trp Asn Cys Gln Tyr Tyr Cys Pro Gly Gly Pro
 35 40 45

tac cac cac cag gtg cca cac ggc cat ggc tac cct cca gca gca gcc 192
 Tyr His His Gln Val Pro His Gly His Gly Tyr Pro Pro Ala Ala Ala
 50 55 60

tac cag caa gta ctc cag cct gct ctg cct ggg cag gtc ctt cct ggg 240
 Tyr Gln Gln Val Leu Gln Pro Ala Leu Pro Gly Gln Val Leu Pro Gly
 65 70 75 80

gca agg gca aga ggc cca cgc cct gtg cag aag gtc atc ctg aat gac Ala Arg Ala Arg Gly Pro Arg Pro Val Gln Lys Val Ile Leu Asn Asp 85 90 95	288
tcc agc ccc caa gac caa gaa gag aga cct gca cag aga gac ttc tct Ser Ser Pro Gln Asp Gln Glu Glu Arg Pro Ala Gln Arg Asp Phe Ser 100 105 110	336
ttc ccg agg ctc ccg agg gac cag ctc tac cgc cca cca tct aat gga Phe Pro Arg Leu Pro Arg Asp Gln Leu Tyr Arg Pro Pro Ser Asn Gly 115 120 125	384
gtg gaa gcc cct gag gag tcc ttg gac ctt cct gca gag ctg aga cca Val Glu Ala Pro Glu Glu Ser Leu Asp Leu Pro Ala Glu Leu Arg Pro 130 135 140	432
cat ggt ccc cag gct cca tcc cta gct gcc gtg cct aga ccc cct agc His Gly Pro Gln Ala Pro Ser Leu Ala Ala Val Pro Arg Pro Pro Ser 145 150 155 160	480
aac ccc tta gcc cga gga act cta aga acc agc aat ttg cca gaa gaa Asn Pro Leu Ala Arg Gly Thr Leu Arg Thr Ser Asn Leu Pro Glu Glu 165 170 175	528
tta cgg aaa gtc ttt atc act tat tct atg gac aca gcc atg gag gtg Leu Arg Lys Val Phe Ile Thr Tyr Ser Met Asp Thr Ala Met Glu Val 180 185 190	576
gtg aaa ttt gtg aac ttt ctg ttg gtg aac ggc ttc caa act gcg att Val Lys Phe Val Asn Phe Leu Leu Val Asn Gly Phe Gln Thr Ala Ile 195 200 205	624
gac ata ttt gag gat aga atc cgg ggt att gat atc att aaa tgg atg Asp Ile Phe Glu Asp Arg Ile Arg Gly Ile Asp Ile Ile Lys Trp Met 210 215 220	672
gag cgc tat ctt cga gat aag aca gtg atg ata atc gta gca atc agc Glu Arg Tyr Leu Arg Asp Lys Thr Val Met Ile Ile Val Ala Ile Ser 225 230 235 240	720
ccc aaa tac aaa cag gat gtg gaa ggc gct gag tcg cag ctg gac gag Pro Lys Tyr Lys Gln Asp Val Glu Gly Ala Glu Ser Gln Leu Asp Glu 245 250 255	768
gac gag cat ggc tta cat act aag tac att cat cgg atg atg cag att Asp Glu His Gly Leu His Thr Lys Tyr Ile His Arg Met Met Gln Ile 260 265 270	816
gag ttc ata agt cag gga agc atg aac ttc aga ttc atc cct gtg ctc Glu Phe Ile Ser Gln Gly Ser Met Asn Phe Arg Phe Ile Pro Val Leu 275 280 285	864
ttc cca aat gcc aag aag gag cat gtg ccg acc tgg ctt cag aac act Phe Pro Asn Ala Lys Lys Glu His Val Pro Thr Trp Leu Gln Asn Thr 290 295 300	912
cat gtt tac agc tgg ccc aag aat aag aaa aac atc ctg ctg cgg ctg His Val Tyr Ser Trp Pro Lys Asn Lys Lys Asn Ile Leu Leu Arg Leu 305 310 315 320	960

ctc agg gag gaa gag tat gtg gct cct ccc cga ggc cct ctg ccc acc 1008
Leu Arg Glu Glu Glu Tyr Val Ala Pro Pro Arg Gly Pro Leu Pro Thr
325 330 335

ctt cag gtg gta ccc ttg tgacgatggc cactccagct cagtgccagc 1056
Leu Gln Val Val Pro Leu
340

ctgttctcac agcattcttc tagcggagct ggctgggtggc acccaggccc tggaacacct 1116
cttctacaga gtcctctgtc tcctgagtct gagttgtcct cgctgggctt ccagagcttc 1176
agtgcctgga tgctgcaggt gacagaaaca aacatctatg accacaaaaa ctctcatcac 1236
ttcagctact tttatgagtc ggtcagatgc tctgtgtcct tagaccagtc taaatcatgc 1296
tcaaataata aaatgattat tctttgt 1323

<210> 18
<211> 342
<212> PRT
<213> Mus musculus

<400> 18

Gln Asp Leu Pro Gly Pro Leu Arg Ser Arg Glu Leu Pro Pro Gln Phe
1 5 10 15

Glu Leu Glu Arg Tyr Pro Met Asn Ala Gln Leu Leu Pro Pro His Pro
20 25 30

Ser Pro Gln Ala Pro Trp Asn Cys Gln Tyr Tyr Cys Pro Gly Gly Pro
35 40 45

Tyr His His Gln Val Pro His Gly His Gly Tyr Pro Pro Ala Ala Ala
50 55 60

Tyr Gln Gln Val Leu Gln Pro Ala Leu Pro Gly Gln Val Leu Pro Gly
65 70 75 80

Ala Arg Ala Arg Gly Pro Arg Pro Val Gln Lys Val Ile Leu Asn Asp
85 90 95

Ser Ser Pro Gln Asp Gln Glu Glu Arg Pro Ala Gln Arg Asp Phe Ser
100 105 110

Phe Pro Arg Leu Pro Arg Asp Gln Leu Tyr Arg Pro Pro Ser Asn Gly
115 120 125

Val Glu Ala Pro Glu Glu Ser Leu Asp Leu Pro Ala Glu Leu Arg Pro
130 135 140

His Gly Pro Gln Ala Pro Ser Leu Ala Ala Val Pro Arg Pro Pro Ser
145 150 155 160

Asn Pro Leu Ala Arg Gly Thr Leu Arg Thr Ser Asn Leu Pro Glu Glu
165 170 175

Leu Arg Lys Val Phe Ile Thr Tyr Ser Met Asp Thr Ala Met Glu Val
180 185 190

Val Lys Phe Val Asn Phe Leu Leu Val Asn Gly Phe Gln Thr Ala Ile
195 200 205

Asp Ile Phe Glu Asp Arg Ile Arg Gly Ile Asp Ile Ile Lys Trp Met
210 215 220

Glu Arg Tyr Leu Arg Asp Lys Thr Val Met Ile Ile Val Ala Ile Ser
225 230 235 240

Pro Lys Tyr Lys Gln Asp Val Glu Gly Ala Glu Ser Gln Leu Asp Glu
245 250 255

Asp Glu His Gly Leu His Thr Lys Tyr Ile His Arg Met Met Gln Ile
260 265 270

Glu Phe Ile Ser Gln Gly Ser Met Asn Phe Arg Phe Ile Pro Val Leu
275 280 285

Phe Pro Asn Ala Lys Lys Glu His Val Pro Thr Trp Leu Gln Asn Thr
290 295 300

His Val Tyr Ser Trp Pro Lys Asn Lys Lys Asn Ile Leu Leu Arg Leu
305 310 315 320

Leu Arg Glu Glu Glu Tyr Val Ala Pro Pro Arg Gly Pro Leu Pro Thr
325 330 335

Leu Gln Val Val Pro Leu
340

<210> 19
<211> 207
<212> PRT
<213> Homo sapiens

<400> 19

Arg Lys Val Trp Ile Ile Tyr Ser Ala Asp His Pro Leu Tyr Val Asp

1

5

10

15

Val Val Leu Lys Phe Ala Gln Phe Leu Leu Thr Ala Cys Gly Thr Glu
20 25 30

Val Ala Leu Asp Leu Leu Glu Glu Gln Ala Ile Ser Glu Ala Gly Val
35 40 45

Met Thr Trp Val Gly Arg Gln Lys Gln Glu Met Val Glu Ser Asn Ser
50 55 60

Lys Ile Ile Val Leu Cys Ser Arg Gly Thr Arg Ala Lys Trp Gln Ala
65 70 75 80

Leu Leu Gly Arg Gly Ala Pro Val Arg Leu Arg Cys Asp His Gly Lys
85 90 95

Pro Val Gly Asp Leu Phe Thr Ala Ala Met Asn Met Ile Leu Pro Asp
100 105 110

Phe Lys Arg Pro Ala Cys Phe Gly Thr Tyr Val Val Cys Tyr Phe Ser
115 120 125

Glu Val Ser Cys Asp Gly Asp Val Pro Asp Leu Phe Gly Ala Ala Pro
130 135 140

Arg Tyr Pro Leu Met Asp Arg Phe Glu Glu Val Tyr Phe Arg Ile Gln
145 150 155 160

Asp Leu Glu Met Phe Gln Pro Gly Arg Met His Arg Val Gly Glu Leu
165 170 175

Ser Gly Asp Asn Tyr Leu Arg Ser Pro Gly Gly Arg Gln Leu Arg Ala
180 185 190

Ala Leu Asp Arg Phe Arg Asp Trp Gln Val Arg Cys Pro Asp Trp
195 200 205

<210> 20
<211> 208
<212> PRT
<213> Mus musculus

<400> 20

Arg Lys Val Trp Ile Val Tyr Ser Ala Asp His Pro Leu Tyr Val Glu
1 5 10 15

Val Val Leu Lys Phe Ala Gln Phe Leu Ile Thr Ala Cys Gly Thr Glu
20 25 30

Val Ala Leu Asp Leu Leu Glu Glu Gln Val Ile Ser Glu Val Gly Val
35 40 45

Met Thr Trp Val Ser Arg Gln Lys Gln Glu Met Val Glu Ser Asn Ser
50 55 60

Lys Ile Ile Ile Leu Cys Ser Arg Gly Thr Gln Ala Lys Trp Lys Ala
65 70 75 80

Ile Leu Gly Trp Ala Glu Pro Ala Val Gln Leu Arg Cys Asp His Trp
85 90 95

Lys Pro Ala Gly Asp Leu Phe Thr Ala Ala Met Asn Met Ile Leu Pro
100 105 110

Asp Phe Lys Arg Pro Ala Cys Phe Gly Thr Tyr Val Val Cys Tyr Phe
115 120 125

Ser Gly Ile Cys Ser Glu Arg Asp Val Pro Asp Leu Phe Asn Ile Thr
130 135 140

Ser Arg Tyr Pro Leu Met Asp Arg Phe Glu Glu Val Tyr Phe Arg Ile
145 150 155 160

Gln Asp Leu Glu Met Phe Glu Pro Gly Arg Met His His Val Arg Glu
165 170 175

Leu Thr Gly Asp Asn Tyr Leu Gln Ser Pro Ser Gly Arg Gln Leu Lys
180 185 190

Glu Ala Val Leu Arg Phe Gln Glu Trp Gln Thr Gln Cys Pro Asp Trp
195 200 205

<210> 21

<211> 190

<212> PRT

<213> *Caenorhabditis elegans*

<400> 21

Val Lys Val Met Ile Val Tyr Ala Asp Asp Asn Asp Leu His Thr Asp
1 5 10 15

Cys Val Lys Lys Leu Val Glu Asn Leu Arg Asn Cys Ala Ser Cys Asp

20

25

30

Pro Val Phe Asp Leu Glu Lys Leu Ile Thr Ala Glu Ile Val Pro Ser
35 40 45

Arg Trp Leu Val Asp Gln Ile Ser Ser Leu Lys Lys Phe Ile Ile Val
50 55 60

Val Ser Asp Cys Ala Glu Lys Ile Leu Asp Thr Glu Ala Ser Glu Thr
65 70 75 80

His Gln Leu Val Gln Ala Arg Pro Phe Ala Asp Leu Phe Gly Pro Ala
85 90 95

Met Glu Met Ile Ile Arg Asp Ala Thr His Asn Phe Pro Glu Ala Arg
100 105 110

Lys Lys Tyr Ala Val Val Arg Phe Asn Tyr Ser Pro His Val Pro Pro
115 120 125

Asn Leu Ala Ile Leu Asn Leu Pro Thr Phe Ile Pro Glu Gln Phe Ala
130 135 140

Gln Leu Thr Ala Phe Leu His Asn Val Glu His Thr Glu Arg Ala Asn
145 150 155 160

Val Thr Gln Asn Ile Ser Glu Ala Gln Ile His Glu Trp Asn Leu Cys
165 170 175

Ala Ser Arg Met Met Ser Phe Phe Val Arg Asn Pro Asn Trp
180 185 190

<210> 22

<211> 178

<212> PRT

<213> *Caenorhabditis elegans*

<400> 22

Phe Lys Val Met Leu Val Cys Pro Glu Val Ser Gly Arg Asp Glu Asp
1 5 10 15

Phe Met Met Arg Ile Ala Asp Ala Leu Lys Lys Ser Asn Asn Lys Val
20 25 30

Val Cys Asp Arg Trp Phe Glu Asp Ser Lys Asn Ala Glu Glu Asn Met
35 40 45

Leu His Trp Val Tyr Glu Gln Thr Lys Ile Ala Glu Lys Ile Ile Val
50 55 60

Phe His Ser Ala Tyr Tyr His Pro Arg Cys Gly Ile Tyr Asp Val Ile
65 70 75 80

Asn Asn Phe Pro Cys Thr Asp Pro Arg Leu Ala His Ile Ala Leu
85 90 95

Thr Pro Glu Ala Gln Arg Ser Val Pro Lys Glu Val Glu Tyr Val Leu
100 105 110

Pro Arg Asp Gln Lys Leu Leu Glu Asp Ala Phe Asp Ile Thr Ile Ala
115 120 125

Asp Pro Leu Val Ile Asp Ile Pro Ile Glu Asp Val Ala Ile Pro Glu
130 135 140

Asn Val Pro Ile His His Glu Ser Cys Asp Ser Ile Asp Ser Arg Asn
145 150 155 160

Asn Ser Lys Thr His Ser Thr Asp Ser Gly Val Ser Ser Leu Ser Ser
165 170 175

Asn Ser

<210> 23
<211> 1107
<212> DNA
<213> Homo sapiens

<400> 23
gtgtggcctc aggtataaga gcggctgctg ccaggtgcat ggccaggtgc acctgtggga 60
ttgccgccag gtgtgcagggc cgctccaaagc ccagcctgcc ccgcgtccgc caccatgacg 120
ctcctccccg gcctcctgtt tctgacactgg ctgcacacat gcctggccca ccatgacccc 180
tccctcaggg ggcaccccca cagtcacggt accccacact gctactcggc tgaggaactg 240
cccctcggcc agggccccc acacctgctg gctcgaggtg ccaagtgggg gcaggctttg 300
cctgtagccc tgggtgtccag cctggaggca gcaagccaca gggggaggca cgagaggccc 360
tcagctacga cccagtgccc ggtgctgcgg ccggaggagg tgttggaggc agacacccac 420
cagcgctcca tctcaccctg gagataccgt gtggacacgg atgaggaccg ctatccacag 480
aagctggcct tcgcccagtg cctgtgcaga ggctgtatcg atgcacggac gggccgcgag 540

acagctgcgc tcaactccgt gcggctgctc cagagcctgc tggtgctgctc ccggccggccc 600
tgctcccgcg acggctcgaa gctccccaca cctggggcct ttgccttcca caccgagttc 660
atccacgtcc ccgtcggctg cacctgcgtg ctgccccgtt cagtgtgacc gccgaggccg 720
tggggccccc agactggaca cgtgtgctcc ccagagggca ccccctattt atgtgtattt 780
attggtattt atatgcctcc cccaaacacta cccttggggt ctggcattc cccgtgtctg 840
gaggacagcc ccccactgtt ctccatct ccagccttag tagtgggg tagaaggagc 900
tcagcacctc ttccagccct taaagctgca gaaaaggtgt cacacggctg cctgtacattt 960
ggctccctgt cctgctcccg gcttcctta ccctatcact ggcctcaggc cccgcaggc 1020
tgcctttcc caacccctt ggaagtaccc ctgtttctta aacaattatt taagtgtacg 1080
tgtattatta aactgatgaa cacatcc 1107

<210> 24
<211> 197
<212> PRT
<213> Homo sapiens

<400> 24

Met Thr Leu Leu Pro Gly Leu Leu Phe Leu Thr Trp Leu His Thr Cys
1 5 10 15

Leu Ala His His Asp Pro Ser Leu Arg Gly His Pro His Ser His Gly
20 25 30

Thr Pro His Cys Tyr Ser Ala Glu Glu Leu Pro Leu Gly Gln Ala Pro
35 40 45

Pro His Leu Leu Ala Arg Gly Ala Lys Trp Gly Gln Ala Leu Pro Val
50 55 60

Ala Leu Val Ser Ser Leu Glu Ala Ala Ser His Arg Gly Arg His Glu
65 70 75 80

Arg Pro Ser Ala Thr Thr Gln Cys Pro Val Leu Arg Pro Glu Glu Val
85 90 95

Leu Glu Ala Asp Thr His Gln Arg Ser Ile Ser Pro Trp Arg Tyr Arg
100 105 110

Val Asp Thr Asp Glu Asp Arg Tyr Pro Gln Lys Leu Ala Phe Ala Glu
115 120 125

Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu Thr Ala

130

135

140

Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu Arg Arg
145 150 155 160

Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly Ala Phe
165 170 175

Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr Cys Val
180 185 190

Leu Pro Arg Ser Val
195